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Aseptic Valves



The valve body of the **RIEGER Aseptic Valves** is hermetically sealed against environment and this guarantees complete security for your liquid products. The design of the valve bodies eliminating dead space and the optimized surfaces make them a prerequisite for sterile process engineering. Due to the building block system the change from aseptic to hygienic, from “air to open” to “air to close”, from liquid to fibrous and granular media is possible without problems. Also the installation dimensions can be customized to the givens in place.

Under special conditions such as high sterilization temperatures, RIEGER Aseptic valves fulfill all demands on operational security and reliable function.

Your advantages

Design	solid valve body no dead spaces completely draining many built-in positions possible
Product safety	hermetically sealed against environment no dome or sump in product space
Maintenance	change of seals without special tools less standing times optimum cleanability screwed-in bellows
Efficiency	long life of the PTFE bellows standard seals low spare part costs

Technical Data

Material	in product contact	1.4404/AISI316L
	optional	1.4435/AISI316L
	non product contact	1.4301/AISI304
Seals	PTFE bellows	PTFE
	metal bellows	1.4571/1.4404
	O-rings/seals	EPDM
Temperatures	maximum	EPDM PTFE
	operating	130 °C* 121 °C* (250 °F)
	temperature	(266 °F)
	sterilizing	150 °C* 135 °C* (275 °F)
	temperature	(300 °F) short-time (approx. 20 min)
Operating pressure	closing pressure	max. 6 bar (87 psi)
	but: change-over valves and mix proof valve for tank type N7	see catalog pages
	actuator control air pressure	min 6 bar (87 psi)- max.10 bar (145 psi)
Surfaces	in product contact	Ra <= 0,8 µm (32 µin)
	optional	electro polished, other surfaces upon request
	no product contact	Ra <=1,6 µm (63 µin)
Connections Standard pipes	DIN 11850-R2 (DIN 11866 A)	
	O.D. tube (DIN 11866 C)	
	DIN EN ISO 1127 (DIN 11866-B)	

* dependent upon operating conditions



3-A versions available

**see 3-A certificate
on website
www.rr-rieger.de**



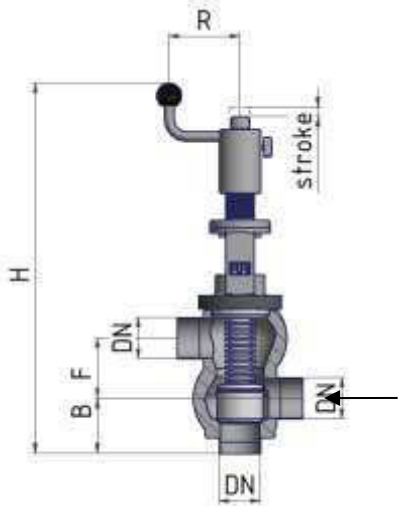


Aseptic Valves



Aseptic Change Over Valve Type LL

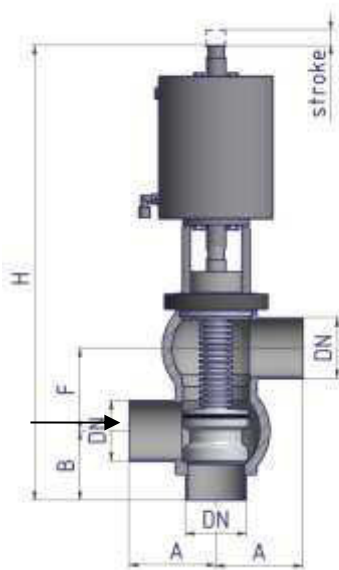
manual with crank handle – 3 ports – one-piece valve body



DN	Pipe	A	B	F	R	H	Stroke	kg
25	29 x 1,5	50	50	55	73	360	18	4,2
40	41 x 1,5	60	60	65	73	385	18	6,3
50	53 x 1,5	80	70	77	90	475	22	9,9
65	70 x 2	100	80	95	90	510	25	12,7
80	85 x 2	125	90	110	90	555	33	17,8
100	104 x 2	150	100	129	90	595	35	23,4
1"	25,4 x 1,65	In case of order					18	4,2
1 1/2"	38,1 x 1,65	you get a 3D step file					18	6,3
2"	50,8 x 1,65	for your design department.					22	9,9
2 1/2"	63,5 x 1,65	Closing pressure of 6 bar					25	12,7
3"	76,2 x 1,65	only with flow direction					33	17,8
4"	101,6 x 2,11	into middle port – see arrow.					35	23,4

Aseptic Change Over Valve Type LL

pneumatic – air to open-spring to close NC – 3 ports – one-piece valve body



DN	Pipe	A	B	F	D	H	Stroke	kg
25	29 x 1,5	50	50	55	90	361	18	6,2
40	41 x 1,5	60	60	65	90	387	18	7,2
50	53 x 1,5	80	70	77	110	459	22	14,6
65	70 x 2	100	80	95	133	539	25	17,4
80	85 x 2	125	90	110	172	630	33	27,5
100	104 x 2	150	100	129	172	665	35	35,2
1"	25,4 x 1,65	In case of order					18	6,2
1 1/2"	38,1 x 1,65	you get a 3D step file					18	7,2
2"	50,8 x 1,65	for your design department.					22	14,6
2 1/2"	63,5 x 1,65	Drawing shows NC -					25	17,4
3"	76,2 x 1,65	NC = If air fails, lower					33	27,5
4"	101,6 x 2,11	port is closed.					35	35,2

Closing pressure of 6 bar is only ensured with flow direction into middle port with control air pressure of at least 6 bar (max. 10 bar) – see arrow.

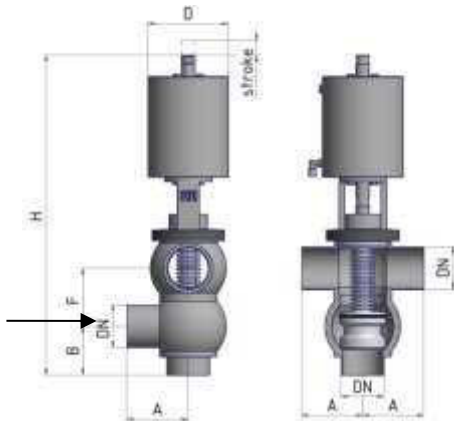


Aseptic Valves



Aseptic Change Over Valve Type TL

pneumatic – air to open-spring to close NC – **4 ports** – **one-piece valve body**



DN	Pipe	A	B	F	D	H	Stroke	kg
25	29 x 1,5	50	50	55	90	361	18	6,2
40	41 x 1,5	60	60	65	90	387	18	7,2
50	53 x 1,5	80	70	77	110	459	22	14,6
65	70 x 2	100	80	95	133	539	25	17,4
80	85 x 2	125	90	110	172	630	33	27,5
100	104 x 2	150	100	129	172	665	35	35,2
1"	25,4 x 1,65	In case of order					18	6,2
1 1/2"	38,1 x 1,65	you get a 3D step file					18	7,2
2"	50,8 x 1,65	for your design department.					22	14,6
2 1/2"	63,5 x 1,65	Drawing shows NC -					25	17,4
3"	76,2 x 1,65	NC = If air fails, lower					33	27,5
4"	101,6x2,11	port is closed.					35	35,2

Closing pressure of 6 bar is only ensured with flow direction into middle port with control air pressure of at least 6 bar (max. 10 bar) – see arrow.



Aseptic Valves



The **RIEGER Aseptic Mix Proof Valve N7** ensures the reliable separation of process lines for liquid products by means of the SIP capable leakage space as well in type „piping“ as in type „tank“. CIP/SIP valves control the steam inlet and outlet in the leakage space.

The outstanding aseptic properties are achieved by **hermetic sealing** from the environment.

A temperature surveyance in the leakage chamber is available upon request.

It is important to note, that the full spring force is applied as well in rest position as when rinsing the valve.

Your advantages

Design	one-piece valve body made from solid bar short design less welding seams few seals in product area
Absolute product protection	safe media separation by leakage space controlled leakage chamber both valve disks are liftable separately
Serviceable maintenance	change of seals without special tools less standing time easy cleaning
Efficiency	long life of the PTFE bellows low maintenance costs with brackets for proximity switches on main actuator



for piping



for tank

Technical Data

Material	in product contact	1.4404/AISI316L
	optional	1.4435/AISI316L
	no product contact	1.4301/AISI304
Seals according to FDA	bellows	PTFE
	O-rings	EPDM

Temperatures maximum	operating temperature sterilizing temperature * dependent upon operating conditions	EPDM	PTFE
		130°C* (266 °F)	121°C* (250 °F)
		150°C* (300 °F)	135°C* (275 °F)
			* short-time (approx. 20 min)

Operating pressure	product closing for type piping	max. 6 bar
	type tank	max. 4 bar
	control air pressure	min. 6 bar - max. 10 bar

Surfaces	in product contact	Ra <= 0,8 µm
	non product contact	Ra <=1,6 µm

Connections	DIN 11850-R2 (DIN 11866 A) O.D. tube (DIN 11866 C)
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unique on the market



PTFE bellows with metal cap or with PEEK cap
resistant to granules i.e. fruit yoghurt;
also available for valve tank type

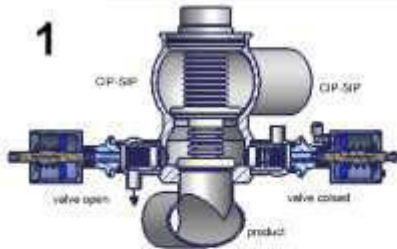


Aseptic Mix Proof Valve N7 for Piping

scheme

aseptic process valve

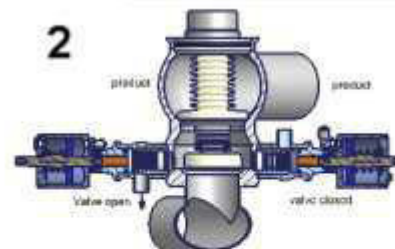
L3 - compressed air connection for cadencing the upper valve disc



1- CIP-cleaning and SIP-sterilization of the upper valve housing including valve seat and safety space - upper valve disc is lifted cycle-wise

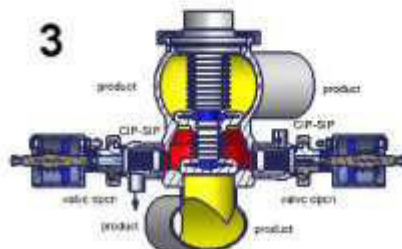
Ventil Zu

L2 - compressed air connection for cadencing the lower valve disc

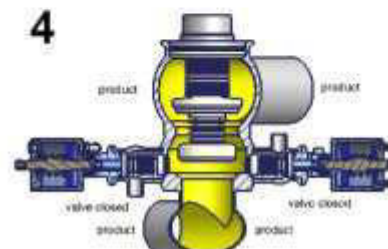


2- CIP-cleaning and SIP-sterilization of the lower valve housing including valve seat and safety space - lower valve disc is lifted cycle-wise

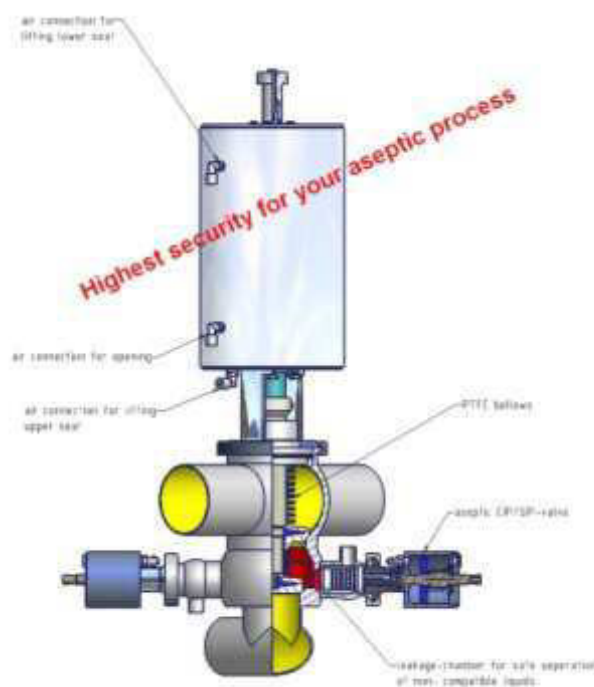
valve open



3- CIP-cleaning and SIP-sterilization of the safety space



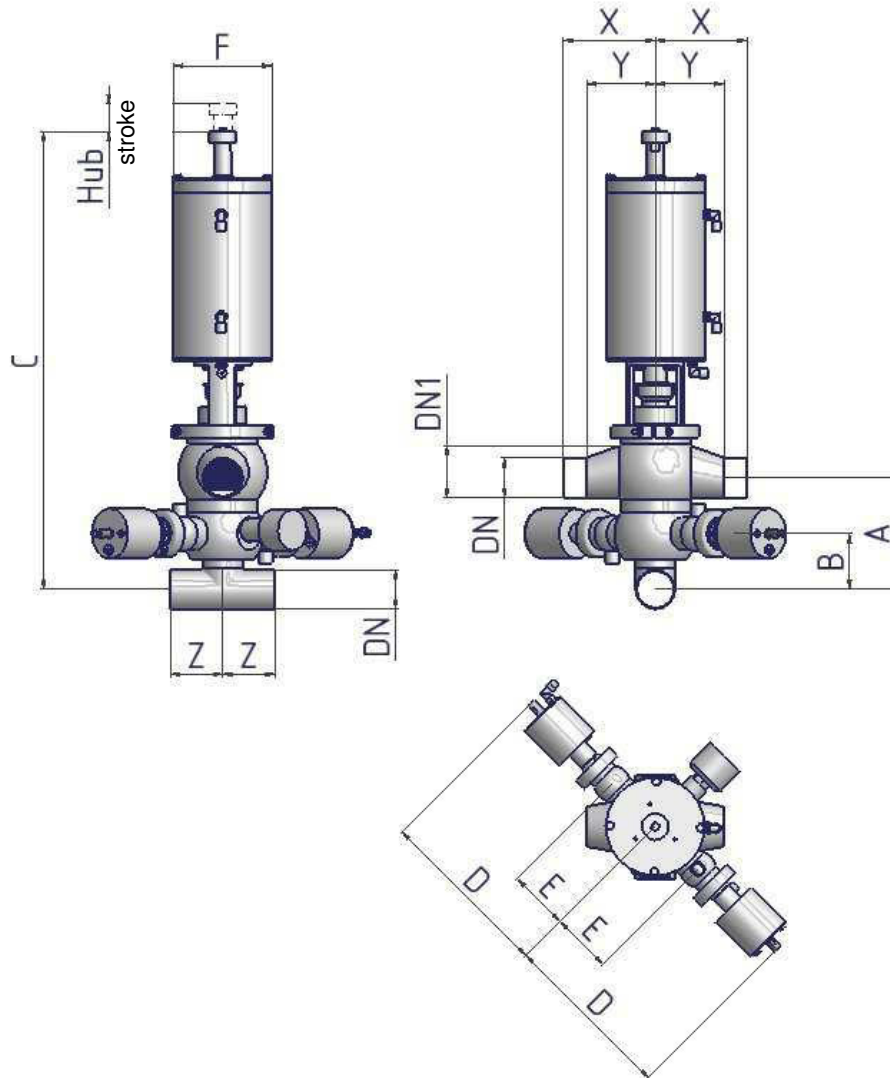
4- compressed air connection for opening both of the valve discs





Aseptic Mix Proof Valve N7 for Piping

Dimensions



X = dimension for clusters (according to customer's request)

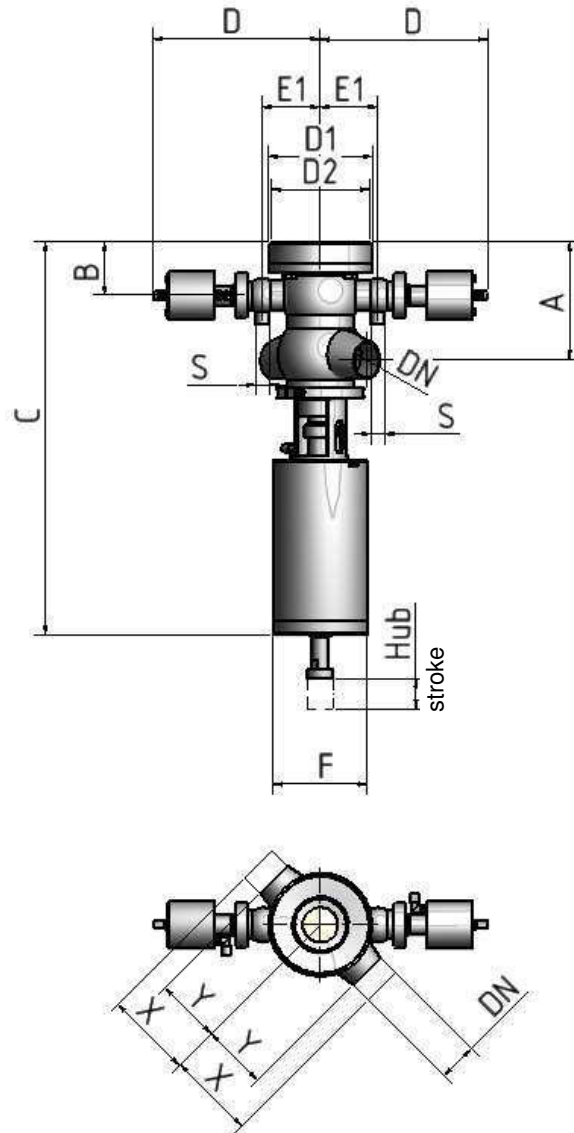
DIN	A	B	C	D	E	ØF	(X)	Y	Z	Stroke	DN1	kg
40(41x1,5)	135	72	605	240	75	133	(110)	80	60	16	50	28
50(53x1,5)	150	76	635	245	81	133	(120)	92	70	20	65	29
65(70x2)	170	83	715	255	92	168	(135)	96	80	22	80	31
80(85x2)	180	89	750	265	100	168	(150)	118	90	27	100	

CIP-SIP valves with weld end DN 15 DIN (19 x 1,5)



Aseptic Mix Proof Valve N7 as Bottom Seat Valve

dimensions



X = dimension for clusters upon customer's request

DIN	A	B	D	D1	D2	E	S	X	Y	kg
40(41x1,5)	150	73	236	133	125	75	19 x 1,5	110	80	28
50(53x1,5)	166	75	242	146	138	81	19 x 1,5	122	92	29
65(70x2)	182	78	246	173	165	92	19 x 1,5	126	96	31
80(85x2)	upon request									

Please note: suitable for maximum product pressure of 4 bar



Aseptic Valves



The **RIEGER Aseptic Mix Proof Valve N13** combines the advantages of the hygienic mix proof valve N1 proven of long standing with those of the aseptic process valve N7.

The bellows hermetically seal against the environment. The double valve seat separates both process lines so that the mixing of two liquids is completely prevented.

The new construction of the bellows renounces of CIP-valves and a leakage chamber and so allows a very dense valve.

The lower as well as the upper valve disk may be lifted separately. The valve may be cleaned and sterilized in "open" and in "closed"-position.

Your advantages

Design	one-piece valve body from solid bar absolutely dead space free completely draining less seams in product area leakage-free liftable available as tank bottom seat version	
Absolute product safety	water hammer safe up to 20 bar against mixing of cleaning agent with product by means of double valve seat locking mechanism rinsable and sterilizable vacuum-safe	
Maintenance	Actuator can be dismantled upwards completely in one piece.	
Efficiency	long life of the PTFE-bellows lows maintenance costs	
Material	in product contact	1.4404/AISI316L
	optional	1.4435/AISI316L
	non product contact	1.4301/AISI304
Seals	bellows	PTFE
	O-rings	EPDM
Temperatures maximum	operating temperature	130 °C* (266 °F)
	sterilizing temperature	121 °C* (250 °F)
		150 °C* (300 °F)
		135 °C* (275 °F)
Operating pressure	closing pressure	short-time (ca. 20 min) max. 6 bar (87 psi)
	control air pressure	min 6 bar (87 psi) - max. 10 bar (145 psi)
Surfaces	in product contact	Ra <= 0,8 µm
	non product contact	Ra <=1,6 µm

* dependent upon operating conditions



patented

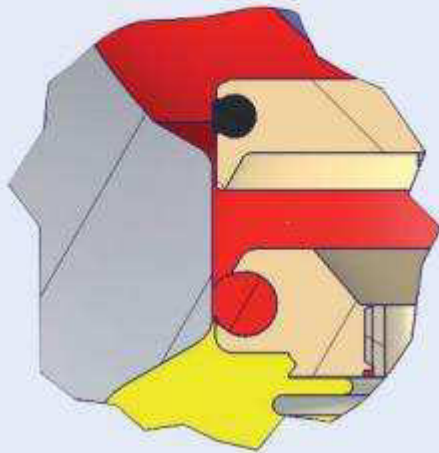




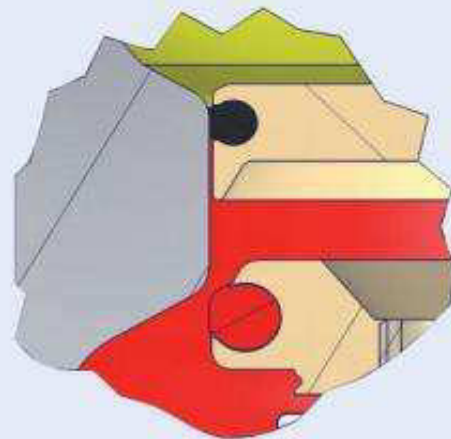
Aseptic Mix Proof Valve N13

schemes

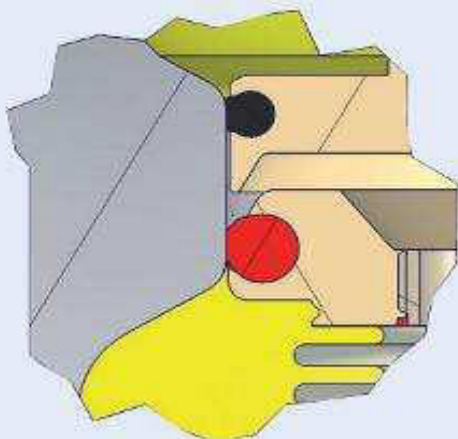
cleaning of upper valve body



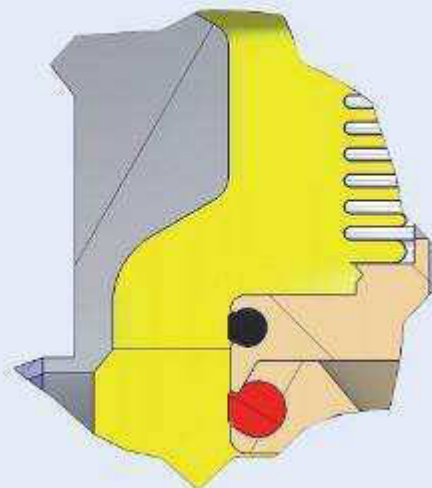
cleaning of lower valve body



valve position „closed“



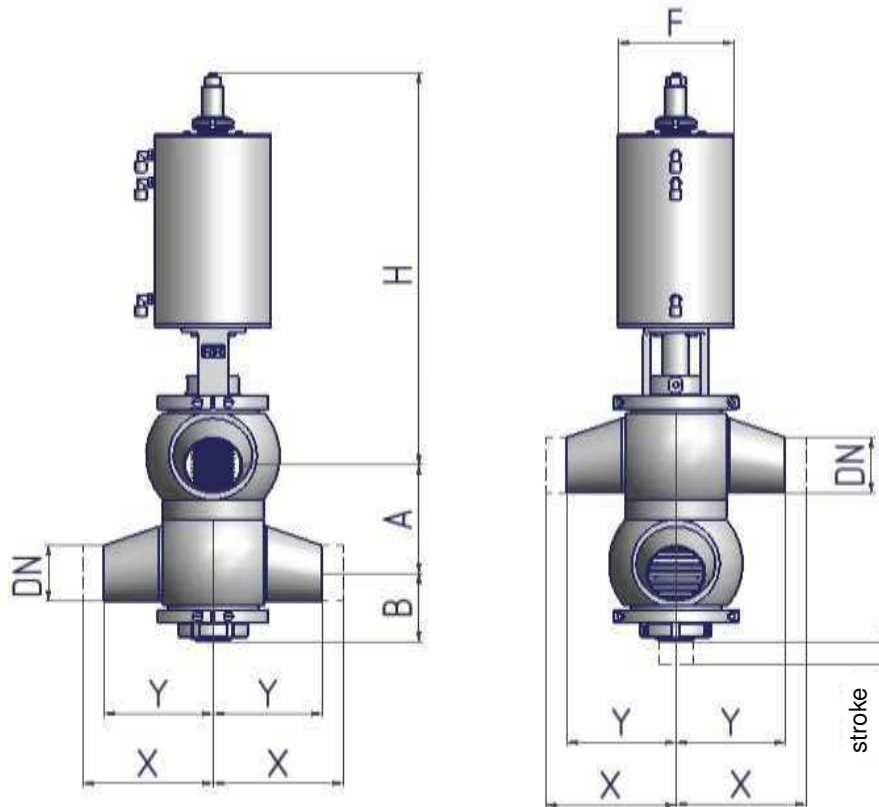
valve position „open“





Aseptic Mix Proof Valve N13.04.400

dimensions



X = dimension for clusters (according to customer's request)

DIN	A	B	H	F	Y	Stroke	kg
40	125	73	444	111	137	32	
50	125	79	438	111	104	32	33
65	138	94	480	138	106	36	33
80	145,5	94	473	138	125	36	33
100	137	103	505	168	150	36	

DN 50 – DN 80: Valve body DN 80

DN 50 and DN 65 with excentrical reducers DN 80/DN 50 resp. DN 80/DN 65



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